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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,506	01/27/2004	Steven Paul Randall	21573.16	2512
27683	7590	05/16/2006	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			CUEVAS, PEDRO J	
			ART UNIT	PAPER NUMBER
			2834	
DATE MAILED: 05/16/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,506

Applicant(s)

RANDALL ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 2-9, filed on April 4, 2006, with respect to the rejection(s) of claim(s) 1-27 under U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 3,184,628 to H. H. Hammerstrom et al. and newly discovered U.S. Patent No. 4,347,543 A to Frister et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9 and 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,184,628 to H. H. Hammerstrom et al. in view of U.S. Patent No. 4,347,543 A to Frister et al.

H. H. Hammerstrom et al. disclose the construction of a variable reluctance polyphase generator comprising:

a first part (stator 11) with at least one phase winding (30) and a second part (rotor 12) which is arranged to move relative to the first part to generate electrical power;
means (exciting windings 28_{a-f}) for creating a bias flux linking the at least one phase winding (column 2, lines 32-34); and
a constant current source (20) connected to excite the at least one bias coil.

However, it fails to disclose means for limiting the magnitude of the phase voltage below that otherwise induced in the at least one phase winding by the bias flux.

Frister et al. teach the construction of a rectifier circuit diode array and circuit protector, particularly for automotive use, comprising a zener diode (16) serially connected with the at least one phase winding, for the purpose of preventing the voltage produced by the generator (11) from exceeding the breakdown voltage of the zener diode (column 2, lines 37-46).

It would have been obvious to one skilled in the art at the time the invention was made to have modified the variable reluctance generator disclosed by H. H. Hammerstrom et al. to include an overvoltage protection circuit such as that disclosed by Frister et al. because Hammerstrom et al. states that overvoltages need to be prevented in vehicle generator systems but does not disclose how such protection may be achieved.

4. With regards to claims 17, a diode always restricts the flow of current to one direction.

5. With regards to claims 1-15, Frister et al. teaches that a method of performing this protection may be done using a zener diode to shunt overvoltages. Further, both references disclose a preference to use fewer parts and providing protection using a single extra element would satisfy this common teaching.

6. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,184,628 to H. H. Hammerstrom et al. in view of U.S. Patent No. 4,347,543 A to Frister et al. as applied to claims 1-9 and 14-23 above, and further in view of U.S. Patent No. 4,835,408 A to Ray et al.

H. H. Hammerstrom et al. in view of Frister et al. disclose the construction of a variable reluctance generator.

Art Unit: 2834

However, it fails to disclose an alternating current source connected to the at least one bias coil.

Ray et al. teach the construction of a power conversion circuit free of active switches comprising:

an alternating current source (11, column 2, lines 45-47) connected to the at least one bias coil (N6, N7); and

a resistive load (R3, R4) connected across each phase winding;
for the purpose of providing energy to the bias coils.

It would have been obvious to one skilled in the art at the time the invention was made to use the rectifier circuit diode array and circuit protector disclosed by Ray et al. on the variable reluctance generator disclosed by H. H. Hammerstrom et al. in view of Frister et al. for the purpose of providing energy to the bias coils.

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pedro J. Cuevas
May 9, 2006



DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800